

XXVI. *On several new or imperfectly understood British and European Plants.*

By CHARLES C. BABINGTON, M.A., F.L.S. F.G.S., &c. In a Letter to EDWARD FORSTER, Esq., V.P.L.S., &c. &c.

Read December 1st and 15th, 1835.

MY DEAR SIR,

IF the following observations on a few newly discovered or imperfectly understood British and European plants appear to you worthy of being communicated to the Linnean Society, I should feel much obliged by your submitting them to that body at an early meeting. I may be allowed to add, that I am indebted to our mutual friend W. Borrer, Esq., F.L.S., &c. for drawing my attention to the subject, and granting me the use of his library and extensive herbarium in its elucidation.

I am, &c.

CHARLES C. BABINGTON.

St. John's College, Cambridge,
October 13th, 1835.

To E. Forster, Esq., V.P.L.S., &c. &c.

1. *Herniaria hirsuta*. Linn.

Caulibus herbaceis prostratis pilis patentibus hirsutis, foliis ovali-oblongis, florum sessilium glomerulis axillaribus.

H. hirsuta. *Linn. Herb.*; *Sp. Pl.* 317. *Huds. Fl. Angl.* i. 109. *Engl. Bot.* 1379. *DeCand. Prodr.* iii. 367. *Pers. Syn.* i. 292. *Sm. Engl. Fl.* ii. 9. *Bot. Gall.* i. 197. *Hooker, Brit. Fl. ed.* 3. 144.

Hoary Rupture-wort. *Petiv. Herb.* x. 10.

Densely hairy throughout; *stems* covered with straight spreading hairs, giving the plant a grey tinge; *flowers* large in comparison with the following species, but fewer in number in each cluster; *calyx* covered with strong

prominent hairs, so as to appear when closed like a little bur; each *sepal* ovate-lanceolate, blunt, with a diaphanous margin; *petals* and *stamens* rising from a fleshy disk, the former resembling the filaments of the anthers, but alternate with them, and, as it appears to me, in an exterior whorl; *stipules* large, acute, membranous, ciliated.

On gravelly ground, near Colney Hatch, Barnet. *Hudson*, *ꝥ.*? July, August.

Mr. E. Forster suspects that this plant is only annual. Messrs. Milne and Gordon in their *Indigenous Botany*, i. 455, say, "We found it in a field at Finchley and at Colney Hatch near Barnet, where Hudson observed it." It has not, I believe, been found since the publication of that work in 1793.

2. *H. glabra*. Linn.

Caulibus herbaceis prostratis pilis minutissimis retrorsum arcuatis tectis, foliis ovali-oblongis glabris, florum sessilium glomerulis axillaribus.

H. glabra. *Linn. Herb.*; *Sp. Pl.* 317. *Huds. Fl. Angl.* i. 108. *Fl. Dan.* 529. *Eugl. Bot.* 206. *DeCand. Prodr.* iii. 367. *Pers. Syn.* i. 292. *Sm. Engl. Fl.* ii. 8. *Bot. Gall.* i. 197. *Hooker, Brit. Fl. ed.* 3. 144.?

Whole plant of a pale yellowish green; *stems* thickly covered with very minute curved hairs, pointing downwards; *flowers* much smaller than in *H. hirsuta*, and more numerous in each of the clusters, which are set so closely on the lateral branches as to present the appearance of a long leafy spike; *calyx* glabrous; *sepals* oblong-ovate, rather acute; *corolla* and *stamens* as in the last; *stigmas* small; *stipules* lanceolate, acute, membranous, slightly ciliated.

The description given under *H. glabra* in Dr. Hooker's *Brit. Fl.* belongs to *H. ciliata*, as does the Cornish locality. In Sir J. E. Smith's herbarium three specimens are preserved on one paper as *H. glabra*; No. 1. "Herb. D. Rose," which is correct; No. 2. from Cornwall, and No. 3. from Halle, both of which belong to my *H. ciliata*, described below. Gaudin, *Fl. Helv.* ii. 243. describes the clusters as opposite to the leaves, but I suspect that he has taken the lateral branches mentioned above for single clusters, in which case they would appear to be opposite.

Near Newmarket. *Rev. Mr. Hemsted.* *ꝥ.*

3. *H. ciliata*.

Caulibus herbaceis prostratis pilis minutissimis retrorsum arcuatis tectis, foliis ovatis ciliatis, florum sessilium glomerulis axillaribus.

H. glabra. Gussone, *Prodr. Fl. Sicul.* i. 293.

Herniaria. Raii *Syn.* 160.

Smooth Rupture-wort. *Pet. Herb.* x. 9.

Whole plant dark green; *stems* covered with minute curved hairs, as in the last species, but much less thickly; *flowers* smaller than in *H. hirsuta*, and more numerous in each of the clusters, which do not coalesce as in *H. glabra*, but form small distinct masses, each consisting of two or three clusters; *sepals* ovate, generally with a strong hair at their apex, and also having a few very minute scattered hairs upon them; *corolla* and *stamens* as in *H. hirsuta*; *stigmas* much larger than in *H. glabra* and more divergent; *leaves* strongly ciliated, and sometimes with a few hairs on their disk, sessile; *stipules* shorter than in the last and more ciliated.

The description of *H. glabra* in Dr. Hooker's *Brit. Fl.* belongs to this species. Ray quotes *Ger.* 454. not *Ger. Emac.* 569.; the latter is probably *H. glabra*; the former is much like *H. hirsuta*.

Near the Lizard Point, Cornwall. *Ray.* I have specimens from thence through the kindness of Mr. Borrer. *γ.*

4. *Crepis virens.* Linn.

Involucro pappum subæquante, foliis glabris lanceolato-runcinatis vel remotè dentatis: caulinis margine planis, acheniis oblongis pappo brevioribus: costis lævibus.

C. polymorpha. Wallr. *Sched. Crit.* i. 426. *Roth, Manuale Bot.* iii. 1116.

C. virens. *Gaud. Fl. Helv.* v. 141.

α. vera. Leaves lanceolate-runcinate, cauline ones lanceolate, sinuato-dentate, or nearly entire, sagittate; stem erect, branched above.

C. virens. *Linn. Sp. Pl.* ii. 1134. *DeCand. Fl. Fr.* v. 447.; *Bot. Gall.* i. 299.

C. tectorum. *Huds. Fl. Angl. ed.* i. 301. *With. Bot. Arr.* iii. 689. (excl. *var.* 4. and latter part of descr.) *Sm. Fl. Brit.* ii. 837. *Curt. Fl. Lond.* v. 55. (good.) *Engl. Bot.* 1111. *Sm. Engl. Fl.* iii. 372. *Hooker, Brit. Fl. ed.* 3. 352. *Lindl. Syn. ed.* 2. 158.

Hedypnois tectorum. *Huds. Fl. Angl. ed. 2.* 341.

C. polymorpha β . virens. *Wallr. l. c. Bluff. et Fingerh. Fl. Germ. ii.* 300.
Roth, Manuale Bot. l. c.

C. virens, var. (*). *Pers. Syn. ii.* 377.?

Common Hawkbeard. *Pet. Herb. xii.* 6.

β . *pinnatifida*. Radical leaves broadly ovate, blunt, remotely dentate, cauline ones linear-lanceolate, very deeply divided into numerous long linear segments, the uppermost nearly entire, sagittate; stem erect, branched above.

C. *pinnatifida*. *Willd. Sp. Pl. iii.* 1604.

C. virens. *Hoffm. Fl. Germ. ii.* 281.

Succory Hawkbeard. *Pet. Herb. xii.* 7.

γ . *stricta*. Wallr. Leaves linear-lanceolate, remotely dentate, cauline ones slightly sagittate; stem erect, branched above.

C. *stricta*. *Scop. ii.* 99. "DC. *Cat. Hort. Monspel.* 99."

C. polymorpha α . *stricta*. *Wallr. l. c.*

Buddle's Hawkbeard. *Pet. Herb. xii.* 5.

δ . *diffusa*. Wallr. Leaves remotely dentate, sinuate or runcinate, cauline ones linear, nearly entire, hardly sagittate; stem diffuse, branching at the base.

C. *tectorum* var. 4. *With. Bot. Arr. iii.* 690.

C. *diffusa*. "DC. *Cat. Hort. Monspel.* 99." *Fl. Fr. v.* 448. *Spreng. Syst. iii.* 634. *Bot. Gall. i.* 299. *Bluff. et Fingerh. l. c.*

C. virens. *Willd. Sp. Pl. iii.* 1604. *Pers. Syn. ii.* 376.

C. polymorpha γ . *diffusa*. *Wallr. l. c. Roth, l. c.*

Dandelion Hawkbit. *Pet. Herb. xii.* 4.?

Stem furrowed, smooth, purplish; in var. α ., β ., γ ., upright, branched above, 1 or 2 feet high: in δ . branched at the base, the branches diffuse, often prostrate; *leaves* glabrous, very variable in size and form; the radical ones narrowing below into a winged petiole, which is generally purple on its under side, simply toothed, runcinate or runcinato-dentate, usually rounded at the end, sometimes acute; cauline ones in var. α . slightly runcinate, the upper ones nearly entire, sagittate: in var. β . linear-lanceolate, deeply divided into numerous, long, linear, patent segments, the few uppermost nearly entire, sagittate: in var. γ . broadly linear-lanceolate,

nearly entire, slightly sagittate: in *var. δ.* all small, linear, nearly entire, hardly sagittate; *involucrum* oval when in bud, becoming afterwards ventricose, equalling the pappus, its outer scales adpressed, few, small, short; *flowers* small, generally variegated with purple on the outside; *fruit* oblong, not attenuated, ribbed, smooth, shorter than the pappus.

The above-mentioned varieties are so completely connected by intermediate forms that it is often quite impossible to determine to which of them a particular specimen ought to be referred; but as they have been adopted as species by some Continental authors, I have thought it right to define their most marked forms. The specimen of *C. virens* in the Linnæan herbarium is of no authority, being without the usual marks of authenticity. In the Smithian herbarium is a specimen which belongs here, sent by Dr. Schrader as probably the *C. virens* of Linnæus, but referred by Sir J. E. Smith to *C. tectorum*.

Very common on walls, banks, &c. ☉. July, September.

5. *C. tectorum*. Linn.

Involucro pappum subæquante, foliis glabris sinuato-pinnatifidis: caulinis linearibus sagittatis margine revolutis, acheniis oblongo-attenuatis pappo æqualibus: costis scabris.

C. tectorum. *Linn. Herb.*; *Sp. Pl.* ii. 1135. *Fl. Dan.* 501. *Willd. Sp. Pl.* iii. 1601. *DeCand. Fl. Fr.* v. 448.; *Bot. Gall.* i. 300. *Pers. Syn.* ii. 376. *Wallr. Sch. Crit.* i. 430. *Lachmann, Fl. Brunsv.* ii. 2. 184. *Endlicher, Fl. Poson.* 293. *Gaud. Fl. Helv.* v. 139. (excl. syn. Smith.)

Very similar to the last, which has been mistaken for it by all British botanists (except Mr. Joseph Woods, to whom I am indebted for directing my attention to their differences,) but it may be at once distinguished by attending to the structure of the fruit, which is very long, equalling the pappus, attenuated above, its ribs rough; the margin also of the upper leaves is revolute, that not being the case in *C. virens*. Wallroth refers *C. Lachenaultii*, *DeCand. Fl. Fr.* v. 449. and *Bot. Gall.* i. 300. to this species, but being totally unacquainted with that plant I cannot form an opinion upon the subject. The specimens preserved in the Smithian herbarium under the name of *C. tectorum*, all belong to *C. virens*, and are from Dauphiny and Switzerland.

This plant does not appear to be a native of Britain. ☉.

6. *C. biennis*. Linn.

Involucro pappo brevior, foliis hispidis runcinato-pinnatifidis, acheniis oblongo-linearibus attenuatis pappo subæqualibus: costis lævibus.

C. biennis. Auct. *Engl. Bot.* 149.

I need only add to Sir J. E. Smith's excellent description, in *Engl. Fl.* iii. 373., that the involucre is ovate-oblong both when in flower and in seed, not becoming ventricose as in *C. virens*. ♂.

7. *Erica Tetralix*. Linn.

Foliis quaternis revolutis linearibus ciliatis supra tomentosis, floribus capitatis pedicellatis, sepalis linearibus ciliatis pedicellisque tomentosis, corollâ ovatâ, antheris aristatis inclusis, stylo subincluso.

E. Tetralix. Auct.

Stems branched only towards their base. Leaves and sepals linear-lanceolate, downy, their margins recurved so as almost to meet behind. ♀.

8. *E. Mackaiana*.

Foliis quaternis ovatis ciliatis supra glabris, floribus capitatis pedicellatis, sepalis ovatis ciliatis glabris, pedicellis pilosis et tomentosis, corollâ oblongo-ovatâ, antheris aristatis inclusis, stylo exserto.

Stem erect, about a foot high, leafy, downy, densely branched from top to bottom. Leaves spreading, 4 in a whorl, stalked, ovate, their margins slightly revolute, glabrous, ciliated, white beneath. Flowers capitate, erect or pendulous, of a rather dark rose colour, on downy stalks, upon which are also a number of long silvery hairs, generally glandular: sepals ovate, ciliated, glabrous; corolla oblong-ovate; anthers inclosed, awned at their base; style exserted.

Distinguished from *E. Tetralix* by the form and structure of its leaves and sepals, the glabrous upper surface of the former, and its total difference in habit. It agrees with *E. ciliaris* in the character of its foliage, but differs

from that plant by having its anthers awned, and by other less marked characters.

Gathered by me on Craigha Moira, Connamara, Ireland, in August 1835, where it covers several acres of rocky ground: my attention was directed to it as perhaps a new British heath by Mr. William MacCalla of Roundstone. I name it, in accordance with a suggestion of Dr. Hooker's, in honour of Mr. J. T. Mackay, the eminent botanist to whom we owe the discovery of *E. mediterranea* in Ireland.

There appears to be some doubt as to the specific distinctness of this plant, several of our best botanists (who have not seen it in its native locality,) being of opinion that it is only a very marked variety of *E. Tetralix*. I cannot, however, concur in that idea, as I noticed no intermediate states, although the latter was growing in the greatest luxuriance within a few yards of *E. Mackaiana*. I may also remark that *E. Tetralix* gradually dwindled in proportion to the dryness of the soil; and that *E. Mackaiana* did the same when, leaving the rock, it encroached upon the bog by which it was surrounded, and on which its ally was remarkably flourishing; neither of them changing at all in character, but only in size and luxuriance. ♀. August, September.

9. *Polygonum maritimum*. Linn.

Caule procumbente basi sublignoso, ochreis 2-partitis lanceolatis demum laceris ramoso-nervatis, foliis lanceolatis subcarnosis, floribus axillaribus, cariopside lævissimâ perianthio longiore.

P. maritimum. Linn. *Sp. Pl.* 519. Willd. *Sp. Pl.* ii. 449. Spreng. *Syst.* ii. 256. Pers. *Syn.* i. 439. DeCand. *Fl. Fr.* iii. 368.; Bot. Gall. i. 405. Gussone, *Prodr. Fl. Sicul.* i. 469. Meisner, *Mon. Polyg. Prodr.* 89.

Root woody, as well as the lower part of the stem, which is branched, round, striated, with numerous joints; *leaves* alternate, lanceolate, generally acute, their margin revolute, coriaceous, longer than the internodes; *stipules* membranous, bipartite, at length torn so as to appear fringed, about equal to the internodes, with numerous ribs, which are branched at their base; *flowers* axillary, 2 or 3 together, double the size of those of *P. aviculare*; *sepals* 4 or 5, white, broadly marked with green in the middle; *stamens* 7 or 8, the 3 inner filaments very broad at their base;

styles 3, short, divergent, with round blunt stigmas; fruit triangular, longer than the perianth, quite smooth and shining.

The British specimens of this plant differ from the foreign ones by having the stipules rather shorter than the joints of the stem, with fewer ribs; in every other point they are exactly similar.

At Christchurch Head on the sandy shore towards Muddiford. *Mr. Borrer*, to whom I am indebted for specimens. I have it also from Herm Bay, Jersey, gathered by Mr. W. C. Trevelyan. 4.

10. *P. Raii*.

Canle procumbente herbaceo, ochreis 2-partitis ovatis demùm laceris venis paucis distantibus simplicibus, floribus axillaribus, cariopside lævissimâ perianthio longiore.

P. marinum. Raii Syn. 147. (excl. syn.)

P. aviculare ϵ . *maritimum. Huds. Fl. Ang.* i. 171. (excl. syn.) *Sm. Engl. Fl.* ii. 238.

P. aviculare β . *Hooker, Brit. Fl. ed.* 3. 185.

This plant appears to be exactly intermediate between *P. maritimum* and *aviculare*, agreeing with the first in its fruit, and with the second in its habit and stipules, which latter are much shorter than the internodes, and have very few, about 2, unbranched distant nerves; the leaves are longer than the internodes on the young shoots, but shorter on the old ones; the margins of the younger ones are slightly revolute; flowers as large as those of *P. maritimum*; fruit much longer than the perianth, quite smooth and shining, not striated with raised points, and quite hidden by the perianth as in *P. aviculare*.

The synonyms from the old authors, given by Ray, are referred by Sir J. E. Smith to *P. maritimum*, in which he is probably correct; but it is a point very difficult to determine on account of the bad custom which then prevailed of using the same blocks both in British and foreign works. I have not been able to ascertain whether "*P. Roberti* of Loiseleur," which Mr. Woods finds so similar to our plant as to be perhaps the same species, is published or merely named in manuscript. Mr. Woods's specimens are from the South of

France. It has also been suggested that our plant may be *P. littorale*, Link, noticed but not described in Schrader's Bot. Journ. for 1800, page 54, and referred by Sprengel to *P. flagellare*, Bertoloni; but the description given by Sebastiani and Mauri in the *Prodromus Floræ Romanæ* (from Bertoloni's manuscripts) proves that plant to have woody perennial stems and longish peduncles, and they quote as a synonym "*P. angustifolium majus*," Barr. Obs. 1141. ic. 546., which is manifestly a very slight variety of *P. maritimum*. Gussone in his *Fl. Sicul. Prodr.* says, under *P. maritimum*, "An *P. littorale* Link En. alt. H. Ber. i. p. 385., quod ad *P. flagellare* adducitur à cl. Spr. in Sy. Veg. ii. p. 295. potius *P. maritimum* varietas est?" I may also add, that *P. flagellare* is not described as a maritime plant, and has, according to Meisner, its fruit granulato-striate. It is his var. γ . *romanum* of *P. aviculare*. Bluff and Fingerhuth in their *Comp. Fl. Germ.* i. 500. refer Link's plant to their "*P. aviculare* β . *littorale*," and describe it as found "ad litt. mar. baltici"; I should suppose that their plant is only the maritime variety of *P. aviculare*, and that their reference to Link is erroneous. Meisner refers this plant to *P. maritimum*, as a synonym, not even considering it to rank as a variety.

Between Marazion and Penzance. Mr. Borrer, first noticed by Ray. Portmarnock sands, Dublin. Dr. Taylor. Near Barmouth, North Wales. Rev. T. Salwey. Between Abermenai and Llanddwyn, Anglesea, the reported place by Dillenius on the authority of Mr. Lhwyd, and on the Killiney sands near Dublin. The Dillanian station at "Brakelsham in Sussex," I am informed by Mr. Borrer has been long since destroyed by the sea. ☉. August, September.

11. *P. dumetorum*. Linn.

Caule volubili tereti, ochreis brevibus subacutis, foliis triangulari-cordatis petiolatis, racemis axillaribus elongatis, floribus longè pedicellatis, cario-
pside triquetrà lævissimâ pendulâ perianthio persistente triptero tectâ.

Convolvulus niger. Dodon. *Pempt.* 396. f. 1. (good.)

P. caule volubili, foliis sagittatis, valvulis seminalibus alatis. Hall. *Helv.* 1562.

P. dumetorum. Lim. *Sp. Pl.* 522. *Flor. Dan.* t. 756. Willd. *Sp. Pl.* ii. 455.

Spreng. Syst. ii. 254. *DeCand. Fl. Fr.* iii. 371.; *Bot. Gall.* i. 408. *Gaud. Fl. Helv.* iii. 48. *Meisner, Mon. Polyg. Prodr.* 63.

Stem 5 or 6 feet high, round, striated, branched, smooth, not scabrous; *leaves* alternate, stalked, triangularly cordate; *racemes* axillary and terminal, lax, elongated; *flowers* with long stalks, when in fruit reflexed, the fruit triquetrous, oblong, quite smooth and shining, covered by the very broadly winged persistent enlarged perianth, which is shorter than its jointed footstalk.

Found September 20, 1834, in a wood at Wimbledon, by Mr. J. A. Hankey, who kindly presented me with a specimen. Some doubts having been expressed as to its identity with *P. dumetorum*, Linn., I was induced, on obtaining additional specimens from my friend Mr. C. E. Broome, gathered at Wimbledon by Mr. W. W. Saunders, to submit it to a rigid examination, and have determined that the synonyms given above belong truly to the Wimbledon plant. ☉. September.

12. *P. Convolvulus*. Linn.

Caule volubili angulato, ochreis brevibus subtruncatis, foliis hastato-cordatis acuminatis petiolatis, racemis axillaribus, floribus pedicellis brevibus, cariopside triquetra granulato-striata perianthio persistente tricarinato involuta.

P. Convolvulus. Auct.

Stems seldom more than 2 feet high, angular, branched, rough; *leaves* hastate-cordate; *fruit* triquetrous, ovate, rough with minute elevated points, not shining, covered by the bluntly keeled, not winged, persistent, enlarged perianth, which is longer than its footstalk. ☉. July—September.

13. *Euphorbia pilosa*. Linn.

Umbellâ irregulari subquinquefidâ trifidâ bifidâ, bracteis omnibus ellipticis omnino glabris, glandulis involucri 4 subrotundis, foliis lato-lanceolatis sessilibus apice tenuissimè serrulatis subtùs pilosis, capsulis plùs minùsve verrucosis et pilosis, seminibus obovatis minutissimè punctatis lævibus.

α. *pilosa*.

E. pilosa. Linn. *Herb.*; *Sp. Pl.* i. 659. Willd. *Sp. Pl.* ii. 917. Bluff. et Fingerh. ii. 449. Bot. Gall. i. 414. Engl. Bot. Suppl. t. 2787. Lindl. *Syn.* ed. 2. p. 329.?

E. pilosa β. *Hook. Brit. Fl. ed. 3.* 388.

E. epithymoides. *Bab. Fl. Bath.* 44. (non *Linn.*)

β. *procera.*

E. procera. *M. Biebers. Cauc.* i. 378.

E. villosa. *Waldst. et Kit. Pl. Hung.* i. 96. *t.* 93.

E. pilosa γ. *Roep. Enum. Euph.* 63. *Hook. Brit. Fl. l. c.*

Stem erect, biennial, with numerous leafy branches; *leaves* broadly lanceolate, oblong, generally blunt, very slightly serrate towards the point, hairy beneath, sometimes slightly so above; *umbel* irregular, of about five principal branches and numerous scattered inferior ones, trifid and then bifid; *bracteas* all elliptical, quite glabrous; *glands* of the *involucrum* transversely ovate; *fruit* covered with more or less prominent points, which are generally purple, and terminate usually in a long hair, sometimes glabrous; *seeds* obovate, minutely punctured, even. In *var.* β. the *leaves* are hairy, the *umbel* more regular, and the *fruit* smooth and glabrous.

α. Near Bath. β. Not yet found in Britain. 4. May, June.

14. *Euphorbia coralloides.* *Linn.*

Umbellâ quinquefidâ trifidâ bifidâ, bracteis universalibus ovato-oblongis in ulterioribus ovatis omnibus villosis, glandulis involucri 4 subrotundis, foliis lato-lanceolatis apice tenuissimè serrulatis villosis, capsulis læviusculis lanatis, seminibus obovatis minutissimè punctatis et obsoletè reticulato-rugosis.

E. coralloides. *Linn. Herb.; Amæn. Acad.* 3. 123.; *Sp. Pl.* i. 659. *Willd. Sp. Pl.* ii. 916. *Roep. Enum. Euph.* 60. *Bluff. et Fingerh.* ii. 446.

E. pilosa. *Hook. Brit. Fl. ed. 1.* 382. (excl. syn. *Reichenb.*) *Lindl. Syn. ed. 2.* p. 329.?

E. pilosa α. *Hook. Brit. Fl. ed. 3.* 388.

Stem erect, annual, with few distant leafless branches, all bearing flowers; *leaves* broadly lanceolate, generally obtuse, very finely serrate, particularly towards their points, covered with longish white hairs on both sides; *umbel* consisting of 5 branches, which are trifid and then bifid; *general bracteas* ovate-oblong, the tertiary ones ovate, all hairy on both sides;

glands of the *involucrum* 4, transversely ovate; *fruit* nearly smooth, densely covered with woolly hairs; *seeds* obovate, minutely punctured, and, under a lens, covered with faint rugose reticulations.

Abundant at Slinfold, Sussex; naturalized? ♂. May, June.

15. *Habenaria chlorantha*.

Calcarea ovario duplò longiore subclavato, labello lineari, integerrimo, petalis superioribus conniventibus obtusis, antherâ infernè duplò latiore truncatâ: loculis obliquè ascendentibus et apice convergentibus.

Orchis alba bifolia minor calcarea oblongo. *Vaill. Paris.* 151. t. 30. f. 7.

O. alba calcari oblongo. *Raii Syn. ed.* 2. 238.

O. hermaphrodita bifolia. *Raii Syn. ed.* 3. 380.

O. n. 1285. *Hall. Hist. Plant.* ii. 146. t. 35. (good.)

O. bifolia. *Hall. Icon. Pl. Helv.* 40. t. 35. (good.) *DeCand. Fl. Fr.* iii. 245.; *Bot. Gall.* i. 446.

O. bifolia β. *Huds. Fl. Angl.* 333.

O. bifolia α. *Sm. Herb.*; *Fl. Brit.* iii. 918.; *Engl. Bot.* t. 22.; *Engl. Fl.* iv. 9. *Curt. Fl. Lond.* vi. 65.

Platanthera chlorantha. “*Reich. ap. Moessl.* ii. 1565. (anno 1828.)” *Reich. Icon. Bot. Cent.* ix. t. 853. *Lindl. Syn. (ed. 2.)* 330.; *Orchid.* iv. 285.

O. bifolia β. *Gaud. Fl. Helv.* v. 425.

O. virescens. *Zollik. ap. Gaud. Fl. Helv.* v. 497. (anno 1829.)

H. bifolia et chlorantha. *Hooker, Brit. Fl. ed.* 3. 376.

The description of this plant given by Sir J. E. Smith in his English Flora is so good as not to require any addition, except in that part which refers to the flower, to which I would add the following:

Upper lateral petals about $\frac{1}{3}$ rd longer than the anther, obtuse; *spur* about twice as long as the germen, thickened towards the end; *anther* very large, truncate, the bases of the cells being twice as far apart as their tops, giving to the whole anther a somewhat semicircular character, the central line between the cells in front elevated into a prominent keel and forming a furrow on the back; *stigma* very broad at its top and slightly pointed in the middle, curved into a semicircular form. *Flower*

sweet-scented in the evening, not scentless as described by many of the Continental authors.

The old figures of this genus are all so imperfect that I have thought it better not to notice them.

In woods and thickets frequent: rarely in pastures. ♀. May, June.

16. *H. bifolia*.

Calcarea ovario duplò longiore subclavato, labello lineari integerrimo, petalis superioribus conniventibus obtusis, antherâ oblongâ truncatâ: loculis parallelis.

O. alba bifolia minor calcari oblongo. Raii Syn. ed. 2. 238.

Orchis bifolia. Linn. Herb.; Sp. Pl. 1331. Huds. Fl. Angl. 333. Sw. in Sven. Bot. v. t. 314. (good.)

O. bifolia β. Sm. Herb.; Fl. Brit. iii. 918.; Engl. Fl. iv. 9.

Pl. brachyglossa. Reich. Icon. Cent. ix. t. 852.

Pl. bifolia, var. brachyglossa. Lindl. Syn. (ed 2.) 330.; Orchid. 4. 285.

Much smaller than the last, and the leaves much more shining; anther truncate, often slightly emarginate, rarely a little rounded at the top, its cells nearly parallel and contiguous throughout their whole extent, their bases much less produced than in *H. chlorantha*, the central line between the cells a furrow in front a keel behind; stigma rather broad, truncate, folded so as to leave a channel between its pointed lobes, middle emarginate.

The only specimen of *O. bifolia* preserved in the Linnæan herbarium clearly belongs to this species.

Moushold Heath near Norwich. *Sir J. E. Smith.* Open part of Epping Forest. *Mr. E. Forster.* Treborth near Bangor, Caernarvonshire. *Mr. John Roberts.* Abundant in heathy parts of the Sussex forests. ♀. June.

17. *H. fornicata*.

“Petalis superioribus arrectis acuminatis, calcarea ovarium plus duplum longo descendente, anthera oblonga fornicata,” labello lineari integerrimo.

Pl. bifolia. Reich. *Icon. Cent.* ix. p. 19. t. 851. Lindl. *Syn. ed.* 2. 261.?
Orchid. 4. 285. (excl. syn. Linn.)

I am only acquainted with this plant from the figure and description quoted above. It appears to be a truly distinct species, having its *anther* rounded at the top and hooded, the *cells* parallel; *stigma* apparently narrower than in *H. bifolia*; the *upper lateral petals* acute, not converging over the anther; the *lip* narrowing slightly from its base, and rather more acute than in either of the preceding species; *spur* very long, subulate. The whole plant is probably smaller than *H. bifolia*.

The Linnæan herbarium having proved that the *Pl. brachyglossa* of Reichenbach is the true *O. bifolia* of the *Sp. Pl.*, I have been obliged to give a new name to this species, and have chosen one derived from the structure of its anther. Reichenbach's description and figure are derived "ad vivam e Flora Dresdensi."

The quotation of Lindley's *Syn.* is probably correct, as he has altered his authority in the 2nd edition of that work, and now quotes Reich., not Linn. as he did in the first. I cannot, however, be certain, since he says, "anther with converging cells"; now they appear to me to be parallel. He also says, "in groves and thickets in England"; he would therefore appear to consider it common: but I have not, after the examination of numerous specimens of the so-called *H. bifolia* from various and distant parts of the country, been able to detect a single individual of this species. He also continues to quote *Engl. Bot.* i. 22. for this species as well as for *H. chlorantha*. He is, I believe, the first botanist who published the fact that two plants, distinguished on the Continent, but confounded by English authors, exist in this country.